

objection.

§102 Rejection of the Claims

Claims 1 and 26 were rejected under 35 USC § 102(b) as being anticipated by Merritt (U.S. Patent No. 5,677,645).

According to the Examiner “Merritt discloses in Fig. 2 a circuit comprising: a plurality of phase generators 122, 144, 146, 132; first and second preboot capacitors 148, 150 coupled to the phase generators; first and second main pump capacitors 138, 141 coupled to the phase generators and the first and second preboot capacitors; and first and second gating devices 134, 136 coupled to the main pump capacitors, as called for in claims 1 and 26.”

Claims 1 and 26 as now amended recite additional elements “first and second pre-boot pre-charge capacitors coupled between the first and second main pump capacitors and the first and second preboot capacitors.” The included first and second pre-boot pre-charge capacitors are primarily responsible for recharging the first and second pre-boot capacitors. Additionally, the pre-boot pre-charge capacitors are holding the voltage in equilibrium between the preboot capacitors and the main pump capacitors allowing the first and second pre-boot capacitors to provide a better preboot.

In contrast, Merritt discloses in Fig. 2 clamping transistors 192 and 194 coupled between the first and second main pump capacitors 138 and 141 and the first and second pre-boot capacitors 148 and 150, respectively. These clamping transistors 192 and 194 can loose the threshold voltage and they only stay coupled when the first and second pre-boot capacitors 148 and 150 are held higher than 138 and 141, respectively. Whereas the present invention discloses in Fig. 4 pre-boot pre-charge capacitors 474 and 476 used in addition to the sharing transistors 465 and 471 between the first and second main pump capacitors 486 and 492 and the first and second pre-boot capacitors 462 and 464 to provide a better voltage equilibrium than the clamping transistors disclosed in Merritt.

Support for the inclusion of additional elements in Claim 1 is clearly stated in the specification page 10 line 29, page 11 lines 1-3, and 12- 16, and in Figure 4.

§103 Rejection of the Claims

Claims 28, 29, and 33 were rejected under 35 USC § 103(a) as being unpatentable over Merritt (U.S. Patent No. 5,677,645).

According to the Examiner “Merritt discloses in Fig. 2 a memory device (charge pump for memory) comprising a plurality of phase generators 122, 144, 146, 132, first and second preboot capacitors 148, 150 coupled to the phase generators and first and second main pump capacitors 138, 141.”

Claims 28, 29, 31 and 33 as now amended includes the additional element “first and second pre-boot pre-charge capacitors coupled between the first and second main pump capacitors and the first and second preboot capacitors.” The included first and second pre-boot pre-charge capacitors are primarily responsible for recharging the first and second pre-boot capacitors. Additionally, the pre-boot pre-charge capacitors are holding the voltage in equilibrium between the preboot capacitors and the main pump capacitors allowing the first and second pre-boot capacitors to provide a better preboot.

In contrast, Merritt discloses in Fig. 2 clamping transistors 192 and 194 coupled between the first and second main pump capacitors 138 and 141 and the first and second pre-boot capacitors 148 and 150, respectively. These clamping transistors 192 and 194 can loose the threshold voltage and they only stay coupled when the first and second pre-boot capacitors 148 and 150 are held higher than 138 and 141, respectively. Whereas the present invention discloses in Fig. 4 pre-boot pre-charge capacitors 474 and 476 used in addition to the sharing transistors 465 and 471 between the first and second main pump capacitors 486 and 492 and the first and second pre-boot capacitors 462 and 464 to provide a better voltage equilibrium than the clamping transistors disclosed in Merritt.

Merritt do not teach or suggest the additional element “first and second pre-boot pre-charge capacitors coupled between the first and second main pump capacitors and the first and second preboot capacitors.”as now recited in the amended claims 28, 29, 31 and 33 and hence overcomes the Examiner’s rejection of *prima facie* case of obviousness.

Support for the inclusion of additional elements in Claim 1 is clearly stated in the specification page 10 line 29, page 11 lines 1-3, and 12- 16, and in Figure 4.

Allowable Subject Matter

Claim 2 was objected to as being dependent upon a rejected base claim, but was indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 3-25, 27, 30, 32, and 34-41 were indicated to be allowed.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney, Kash Nama, at (603) 888-7958 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

TODD A. MERRITT

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 373-6904

Date

9/17/01

By



David C. Peterson
Reg. No. 47,857

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 17 day of September, 2001.

Jane E. Brockschink

Name

Signature

